ATTORNEY DOCKET No. CANO:019

## IN THE CLAIMS

The status of the claims as presently amended is as follows:

1. (Currently Amended) An image forming apparatus comprising:

readinginputting means for readinginputting images-recorded on originals;

image forming means for forming images on blank sheets based on the <u>readinput</u> images;

stacking means for stacking a plurality of insert sheets which are fed in a manner bypassing image formation by said image forming means and inserted between saidthe sheets having images formed thereon by said image forming means, in a predetermined order in which the insert sheets are inserted;

inserter means for reading out<u>feeding</u> the stacked insert sheets and inserting same between thesaid sheets having images formed thereon;

designating means for designating at least one position in said sheets having images formed thereon for insertion of at least one of the insert sheets by said inserter means;

detecting means for detecting an insert sheet to be inserted first when a plurality of positions have been designated by said designating means; and

discharging means operable when said detecting means detects that the insert sheet read outfed by said inserter means is not the insert sheet to be inserted first, for discharging insert sheets from said stacking means onto at least one tray other than a tray onto which the insert sheet to be inserted first is discharged until the insert sheet to be inserted first is detected.

2. (Currently Amended) An image forming apparatus according to claim 1, wherein said stacking means comprises a plurality of trays for stacking said plurality of insert sheets in a divided manner, the image forming apparatus further comprising selecting means capable of selecting between two types of stacking modes consisting of a first stacking mode in which a same type of insert sheets are stacked on each of said plurality of trays and a second stacking mode in which plural types of insert sheets are stacked in order in which they are inserted on each of said plurality of trays, and wherein said discharging means discharges insert sheets from said stacking means when while said second stacking mode is selected by said selecting means.

Sn.09/778.993

ATTORNEY DOCKET No. CANO:019

- 3. (Original) An image forming apparatus according to claim 1, further comprising postprocessing means for stacking said sheets having images formed thereon by said image forming means in a fashion mixed with insert sheets inserted by said inserter means, and for carrying out post-processing on the mixedly stacked sheets.
- 4. (*Original*) An image forming apparatus according to claim 3, wherein said discharging means discharges said insert sheets to a location other than said post-processing means.
- 5. (*Original*) An image forming apparatus according to claim 1, comprising a conveyance path for insert sheets, and wherein said detecting means is provided on said conveyance path for insert sheets.
- 6. (Currently Amended) An image forming apparatus comprising:

reading inputting means for reading inputting images recorded on originals;

image forming means for forming images on blank sheets based on the <u>readinput</u> images;

stacking means for stacking a plurality of insert sheets which are fed in a manner bypassing image formation by said image forming means and inserted between the sheets having images formed thereon by said image forming means, in a predetermined order in which the insert sheets are inserted;

inserter means for reading outseeding the stacked insert sheets and inserting same between said sheets having images formed thereon;

designating means for designating at least one position in said sheets having images formed thereon for insertion of at least one of the insert sheets by said inserter means;

detecting means for detecting an insert sheet to be inserted first when a plurality of positions have been designated by said designating means;

interrupting means for interrupting a sheet inserting operation of said inserter means when at least one of the insert sheets has jammed while being inserted by said inserter means; and

discharging means operable when said detecting means detects that the insert sheet

**ATTORNEY DOCKET NO. CANO:019** 

read-outfed by said inserter means is not the insert sheet to be inserted first after the apparatus has recovered from the interruption by removing the at least one jammed insert sheet, for discharging insert sheets from said stacking means onto at least one tray other than a tray onto which the insert sheet to be inserted first is discharged until the insert sheet to be inserted first is detected, and for further discharging insert sheets from said stacking means up to an insert sheet immediately preceding a same type of insert sheet as the at least one jammed insert sheet.

- 7. (Currently Amended) An image forming apparatus according to claim 6, for stacking said plurality of insert sheets in a divided manner, the image forming apparatus further comprising selecting means capable of selecting between two types of stacking modes consisting of a first stacking mode in which a same type of insert sheets are stacked on each of said plurality of trays and a second stacking mode in which plural types of insert sheets are stacked in order in which they are inserted on each of said plurality of trays, and wherein said discharging means discharges insert sheets from said stacking means when while said second stacking mode is selected by said selecting means.
- 8. (Original) An image forming apparatus according to claim 6, further comprising post-processing means for stacking said sheets having images formed thereon by said image forming means in a fashion mixed with insert sheets inserted by said inserter means, and for carrying out post-processing on the mixedly stacked sheets.
- 9. (Original) An image forming apparatus according to claim 8, wherein said discharging means discharges said insert sheets to a location other than said post-processing means.
- 10. (*Original*) An image forming apparatus according to claim 6, comprising a conveyance path for insert sheets, and wherein said detecting means is provided on said conveyance path for insert sheets.

ATTORNEY DOCKET No. CANO:019

11. (Currently Amended) An image forming apparatus comprising:

reading inputting means for reading inputting images recorded on originals; image forming means for forming images on blank sheets based on the readinput images;

stacking means for stacking a plurality of insert sheets which are fed in a manner bypassing image formation by said image forming means and inserted between the sheets having images formed thereon by said image forming means, in a predetermined order in which the insert sheets are inserted;

inserter means for reading out<u>feeding</u> the stacked insert sheets and inserting same between said sheets having images formed thereon;

mixed stacking means for stacking in a mixed fashion the sheets having images formed thereon by said image forming means and insert sheets to be inserted by said inserter means between the sheets having images formed thereon;

insert sheet discharging detecting means for detecting that said insert sheets have been discharged to said mixed stacking means; and

sheet feeding control means responsive to detection of discharging of said insert sheets by said insert sheet discharging detecting means, for controlling such that feeding of said blank sheets to said image forming means be started.

12. (Currently Amended) An image forming apparatus comprising:

reading inputting means for reading inputting images recorded on originals;

image forming means for forming images on blank sheets based on the <u>readinput</u> images;

stacking means for stacking a plurality of insert sheets which are fed in a manner bypassing image formation by said image forming means and inserted between the sheets having images formed thereon by said image forming means, in a predetermined order in which the insert sheets are inserted;

inserter means for reading out<u>feeding</u> the stacked insert sheets and inserting same between said sheets having images formed thereon;

mixed stacking means for stacking in a mixed fashion the sheets having images formed

SN.09/778,993

**ATTORNEY DOCKET No. CANO:019** 

thereon by said image forming means and insert sheets to be inserted by said inserter means between the sheets having images formed thereon;

image formed sheet discharging detecting means for detecting that said sheets having image formed thereon have been discharged to the mixed stacking means; and

readinginserting control means responsive to detection of discharging of said insert sheets <u>having image formed thereon</u> by said image formed sheet discharging detecting means, for controlling such that <u>readingfeeding</u> of said insert sheets by said inserter means be started.

13. (Currently Amended) An image forming apparatus comprising:

readinginputting means for readinginputting images recorded on originals; image forming means for forming images on blank sheets based on the readinput images;

stacking means for stacking a plurality of insert sheets which are fed in a manner bypassing image formation by said image forming means and inserted between the sheets having images formed thereon by said image forming means, in a predetermined order in which the insert sheets are inserted;

inserter means for <u>reading outfeeding</u> the stacked insert sheets and inserting same between said sheets having images formed thereon;

mixed stacking means for stacking in a mixed fashion the sheets having images formed thereon by said image forming means and insert sheets to be inserted by said inserter means between the sheets having images formed thereon;

insert sheet discharging detecting means for detecting that said insert sheets have been discharged to said mixed stacking means;

sheet feeding control means responsive to detection of discharging of said insert sheets by said insert sheet discharging detecting means, for controlling such that feeding of said blank sheets to said image forming means be started;

image formed sheet discharging detecting means for detecting that said sheets having image formed thereon have been discharged to the mixed stacking means; and

reading inserting control means responsive to detection of discharging of said insert sheets having image formed thereon by said image formed sheet discharging detecting means,

SN.09 /778.993

ATTORNEY DOCKET No. CANO:019

for controlling such that readingfeeding of said insert sheets by said inserter means be started.

14. (*Currently Amended*) A control method of controlling an image forming apparatus, comprising the steps of:

readinginputting images recorded on originals by readinginputting means; forming images on blank sheets based on the readinput images by image forming means;

reading outfeeding insert sheets from a plurality of insert sheets stacked by stacking means, which are fed in a manner bypassing image formation by said image forming means and inserted between the sheets having images formed thereon by said image forming means, in a predetermined order in which the insert sheets are inserted and inserting the read outfed insert sheets between the sheets having images formed thereon by said image forming means, by inserter means;

designating at least one position in said sheets having images formed thereon for insertion of at least one of the insert sheets by said inserter means, by designating means;

detecting an insert sheet to be inserted first by detecting means when a plurality of positions have been designated by said designating means; and

discharging insert sheets from said stacking means onto at least one tray other than a tray onto which the insert sheet to be inserted first is discharged until the insert sheet to be inserted first is detected, by discharging means when said detecting means detects that the insert sheet read outsed by said inserter means is not the insert sheet to be inserted first.

15. (Currently Amended) A control method according to claim 14, wherein said stacking means comprises a plurality of trays for stacking said plurality of insert sheets in a divided manner, the control method further comprising a step of selecting by selecting means between two types of stacking modes consisting of a first stacking mode in which a same type of insert sheets are stacked on each of said plurality of trays and a second stacking mode in which plural types of insert sheets are stacked in order in which they are inserted on each of said plurality of trays, and wherein said discharging step comprises discharging insert sheets from said stacking means.

ATTORNEY DOCKET No. CANO:019

- 16. (Original) A control method according to claim 14, further comprising the steps of stacking said sheets having images formed thereon by said image forming means in a fashion mixed with insert sheets inserted by said inserter means, and carrying out post-processing on the mixedly stacked sheets, by post-processing means.
- 17. (*Original*) A control method according to claim 16, wherein said discharging step comprises discharging said insert sheets to a location other than said post-processing means.
- 18. (Original) A control method according to claim 14, wherein said detecting means is provided on a conveyance path for insert sheets.
- 19. (Currently Amended) A control method of controlling an image forming apparatus, comprising the steps of:

readinginputting images recorded on originals by readinginputting means;
forming images on blank sheets based on the readinput images by image forming means:

reading outfeeding insert sheets from a plurality of insert sheets stacked by stacking means, which are fed in a manner bypassing image formation by said image forming means and inserted between the sheets having images formed thereon by said image forming means, in a predetermined order in which the insert sheets are inserted and inserting the read outfed insert sheets between the sheets having images formed thereon by said image forming means, by inserter means;

designating at least one position in said sheets having images formed thereon for insertion of at least one of the insert sheets by said inserter means, by designating means;

detecting an insert sheet to be inserted first by detecting means when a plurality of positions have been designated by said designating means;

interrupting a sheet inserting operation of said inserter means by interrupting means when at least one of the insert sheets has jammed while being inserted by said inserter means; and

discharging insert sheets from said stacking means onto at least one tray other than a

**ATTORNEY DOCKET NO. CANO:019** 

tray onto which the insert sheet to be inserted first is discharged until the insert sheet to be inserted first is detected, and further discharging insert sheets from said stacking means up to an insert sheet immediately preceding a same type of sheet as the at least one jammed insert sheet, by discharging means, when said detecting means detects that the insert sheet read outsed by said inserter means is not the insert sheet to be inserted first after the apparatus has recovered from the interruption by removing the at least one jammed insert sheet.

- 20. (Currently Amended) A control method according to claim 19, wherein said stacking means comprises a plurality of trays for stacking said plurality of insert sheets in a divided manner, the control method further comprising a step of selecting by selecting means between two types of stacking modes consisting of a first stacking mode in which a same type of insert sheets are stacked on each of said plurality of trays and a second stacking mode in which plural types of insert sheets are stacked in order in which they are inserted on each of said plurality of trays, and wherein said discharging step comprises discharging insert sheets from said stacking means when is executed while said second stacking mode is selected by said selecting means.
- 21. (*Original*) A control method according to claim 19, further comprising the steps of stacking said sheets having images formed thereon by said image forming means in a fashion mixed with insert sheets inserted by said inserter means, and carrying out post-processing on the mixedly stacked sheets, by post-processing means.
- 22. (Original) A control method according to claim 21, wherein said discharging step comprises discharging said insert sheets to a location other than said post-processing means.
- 23. (*Original*) A control method according to claim 19, wherein said detecting means is provided on a conveyance path for insert sheets.
- 24. (*Currently Amended*) A control method of controlling an image forming apparatus, comprising the steps of:

readinginputting images recorded on originals by readinginputting means;

SN.09 /778,993

ATTORNEY DOCKET No. CANO:019

forming images on blank sheets based on the <del>readinput</del> images by image forming means;

reading outfeeding insert sheets from a plurality of insert sheets stacked by stacking means, which are fed in a manner bypassing image formation by said image forming means and inserted between the sheets having images formed thereon by said image forming means, in a predetermined order in which the insert sheets are inserted and inserting the read-outfed insert sheets between the sheets having images formed thereon by said image forming means, by inserter means;

detecting by insert sheet discharging detecting means that said insert sheets have been discharged to mixed stacking means that stacks in a mixed fashion the sheets having images formed thereon by said image forming means and insert sheets to be inserted by said inserter means between the sheets having images formed thereon; and

starting feeding of said blank sheets to said image forming means in response to detection of discharging of said insert sheets by said insert sheet discharging detecting means.

25. (Currently Amended) A control method of controlling an image forming apparatus, comprising the steps of:

reading inputting images recorded on originals by reading inputting means; forming images on blank sheets based on the readinput images by image forming means:

reading outfeeding insert sheets from a plurality of insert sheets stacked by stacking means, which are fed in a manner bypassing image formation by said image forming means and inserted between the sheets having images formed thereon by said image forming means, in a predetermined order in which the insert sheets are inserted and inserting the read outfed insert sheets between the sheets having images formed thereon by said image forming means, by inserter means;

detecting by insert sheet discharging detecting means that said insert sheets have been discharged to mixed stacking means that stacks in a mixed fashion the sheets having images formed thereon by said image forming means and insert sheets to be inserted by said inserter means between the sheets having images formed thereon; and

Sn.09/778.993

ATTORNEY DOCKET No. CANO:019

starting reading reading of said insert sheets by said inserter means in response to detection of discharging of said insert-sheets having images formed thereon by said image formed sheet discharging detecting forming means.

26. (*Currently Amended*) A control method of controlling an image forming apparatus, comprising the steps of:

readinginputting images recorded on originals by readinginputting means; forming images on blank sheets based on the readinput images by image forming means;

reading outfeeding insert sheets from a plurality of insert sheets stacked by stacking means, which are fed in a manner bypassing image formation by said image forming means and inserted between the sheets having images formed thereon by said image forming means, in a predetermined order in which the insert sheets are inserted and inserting the read outfed insert sheets between the sheets having images formed thereon by said image forming means, by inserter means;

detecting by insert sheet discharging detecting means that said insert sheets have been discharged to mixed stacking means that stacks in a mixed fashion the sheets having images formed thereon by said image forming means and insert sheets to be inserted by said inserter means between the sheets having images formed thereon;—and

starting sheet feeding of said blank sheet to said image forming means when discharging of said insert sheet has been detected by said insert sheet discharging detecting means:

detecting with an image formed sheet discharging detecting means that said sheet having image formed thereon has been discharged to said mixed stacking means; and

starting feeding of said blank sheets to said image forming means in response to detection of discharging of said insert sheets by said insert sheet discharging detecting means;

detecting by image formed sheet discharging detecting means that said sheets having image formed thereon have been discharged to said mixed stacking means; and

starting <u>readingfeeding</u> of said insert sheets by said inserter means in response to detection of discharging of said insert sheets-by said image formed sheet discharging detecting

ATTORNEY DOCKET No. CANO:019

means.

27. (*Currently Amended*) A machine readable storage medium storing instructions of a program for causing a computer to execute an image processing method comprising the steps of:

readinginputting images recorded on originals by readinginputting means;

forming images on blank sheets based on the readinput images by image forming means;

reading out<u>feeding</u> insert sheets from a plurality of insert sheets stacked by stacking means, which are fed in a manner bypassing image formation by said image forming means and inserted between the sheets having images formed thereon by said image forming means, in a predetermined order in which the insert sheets are inserted and inserting the read outfed insert sheets between the sheets having images formed thereon by said image forming means, by inserter means;

designating at least one position in said sheets having images formed thereon for insertion of at least one of the insert sheets by said inserter means, by designating means;

detecting an insert sheet to be inserted first by detecting means when a plurality of positions have been designated by said designating means; and

discharging insert sheets from said stacking means onto at least one tray other than a tray onto which the insert sheet to be inserted first is discharged until the insert sheet to be inserted first is detected, by discharging means when said detecting means detects that the insert sheet read outsed by said inserter means is not the insert sheet to be inserted first.

28-31. (Canceled)

32. (Currently Amended) A machine readable storage medium storing instructions of a program for causing a computer to execute an image processing method comprising the steps of:

readinginputting images recorded on originals by readinginputting means;

forming images on blank sheets based on the <u>readinput</u> images by image forming means:

reading outfeeding insert sheets from a plurality of insert sheets stacked by stacking

ATTORNEY DOCKET No. CANO:019

means, which are fed in a manner bypassing image formation by said image forming means and inserted between the sheets having images formed thereon by said image forming means, in a predetermined order in which the insert sheets are inserted and inserting the read outsed insert sheets between the sheets having images formed thereon by said image forming means, by inserter means;

designating at least one position in said sheets having images formed thereon for insertion of at least one of the insert sheets by said inserter means, by designating means;

detecting an insert sheet to be inserted first by detecting means when a plurality of positions have been designated by said designating means;

interrupting a sheet inserting operation of said inserter means by interrupting means when at least one of the insert sheets has jammed while being inserted by said inserter means; and

discharging insert sheets from said stacking means onto at least one tray other than a tray onto which the insert sheet to be inserted first is discharged until the insert sheet to be inserted first is detected, and further discharging insert sheets from said stacking means up to an insert sheet immediately preceding a same type of sheet as the at least one jammed insert sheet, by discharging means, when said detecting means detects that the insert sheet read eutfed by said inserter means is not the insert sheet to be inserted first after the apparatus has recovered from the interruption by removing the at least one jammed insert sheet.

33-36. (Canceled)

37. (Currently Amended) A machine readable storage medium storing instructions of a program for causing a computer to execute an image processing method comprising the steps of:

readinginputting images recorded on originals by readinginputting means;

forming images on blank sheets based on the readinput images by image forming means;

reading outfeeding insert sheets from a plurality of insert sheets stacked by stacking means, which are fed in a manner bypassing image formation by said image forming means and inserted between the sheets having images formed thereon by said image forming means.

ATTORNEY DOCKET No. CANO:019

in a predetermined order in which the insert sheets are inserted and inserting the read outsed insert sheets between the sheets having images formed thereon by said image forming means, by inserter means;

detecting by insert sheet discharging detecting means that said insert sheets have been discharged to mixed stacking means that stacks in a mixed fashion the sheets having images formed thereon by said image forming means and insert sheets to be inserted by said inserter means between the sheets having images formed thereon; and

starting feeding of said blank sheets to said image forming means in response to detection of discharging of said insert sheets by said insert sheet discharging detecting means.

38. (Currently Amended) A machine readable storage medium storing instructions of a program for causing a computer to execute an image processing method comprising the steps of:

reading images with reading by inputting means image recorded on an original; reading images recorded on originals by reading means;

forming images on blank sheets based on the <u>readinput</u> images by image forming means:

reading outfeeding insert sheets from a plurality of insert sheets stacked by stacking means, which are fed in a manner bypassing image formation by said image forming means and inserted between the sheets having images formed thereon by said image forming means, in a predetermined order in which the insert sheets are inserted and inserting the read outfed insert sheets between the sheets having images formed thereon by said image forming means, by inserter means;

detecting by insert sheet discharging detecting means that said insert sheets have been discharged to mixed stacking means that stacks in a mixed fashion the sheets having images formed thereon by said image forming means and insert sheets to be inserted by said inserter means between the sheets having images formed thereon; and

starting <u>reading reading feeding</u> of said insert sheets by said inserter means in response to detection of discharging of said <u>insert</u>-sheets <u>having images formed thereon</u> by said image <u>formed sheet discharging detecting forming means.</u>

means:

ATTORNEY DOCKET No. CANO:019

39. (*Currently Amended*) A machine readable storage medium storing instructions of a program for causing a computer to execute an image processing method comprising the steps of:

readinginputting images recorded on originals by readinginputting means; forming images on blank sheets based on the readinput images by image forming

reading out insert sheets from a plurality of insert sheets stacked by stacking means, which are fed in a manner bypassing image formation by said image forming means and inserted between the sheets having images formed thereon by said image forming means and inserting the read out insert sheets between the sheets having images formed thereon by said image forming means, by inserter means;

reading out<u>feeding</u> insert sheets from a plurality of insert sheets stacked by stacking means, which are fed in a manner bypassing image formation by said image forming means and inserted between the sheets having images formed thereon by said image forming means, in a predetermined order in which the insert sheets are inserted and inserting the read out<u>fed</u> insert sheets between the sheets having images formed thereon by said image forming means, by inserter means;

detecting by insert sheet discharging detecting means that said insert sheets have been discharged to mixed stacking means that stacks in a mixed fashion the sheets having images formed thereon by said image forming means and insert sheets to be inserted by said inserter means between the sheets having images formed thereon; and

starting sheet feeding of said blank sheet to said image forming means when discharging of said insert sheet has been detected by said insert sheet discharging detecting means:

detecting with an image formed sheet discharging detecting means that said sheet having image formed thereon has been discharged to said mixed stacking means; and starting feeding of said blank sheets to said image forming means in response to detection of discharging of said insert sheets by said insert sheet discharging detecting means; detecting by image formed sheet discharging detecting means that said sheets having image formed thereon have been discharged to said mixed stacking means; and starting reading feeding of said insert sheets by said Inserter means in response to

**ATTORNEY DOCKET NO. CANO:019** 

detection of discharging of said insert sheets by said image formed sheet discharging detecting means.